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Hieron.; but a recent examination of a part of Hieronymus' type shows *S. montanensis* to be hardly distinct from *S. Wallacei*, as now understood. That collective species is well set apart from *S. densa* and allied species by its laxly cespitose or short trailing stems, its elongate ascending, branched, cordlike branches, and its uniform, rigidly ascending leaves, these never unequal and secund. Habital characters in this group were not well brought out by Hieronymus, who had, unfortunately, only very scant material at his disposal.

WASHINGTON, D. C.

A New Western Species of Pellaea.

F. K. BUTTERS.

In 1917, I published in the Fern Journal¹ some observations on *Pellaea atropurpurea*, *P. glabella*, and certain western forms related to the latter species. In that paper, I treated these western forms as varieties of *P. glabella*. After its publication Mr. W. R. Maxon called my attention to certain specimens of western *Pellaeas* in the National Herbarium, and very kindly sent me all the material of *P. glabella* and its varieties in that herbarium. The results of the study of this material, together with a considerable amount in the herbarium of the University of Minnesota were embodied in an article, which was prepared for publication last summer. An unfortunate loss of manuscript has necessitated the rewriting of this article, and as it will be several months at least before it can be published, it seems best to publish in a preliminary note the conclusions reached.

¹ Am. Fern Journ. 7: 77. 1917.

Both of the western forms described in my former article as varieties of *Pellaea glabella* appear to be distinct species. One of these, *P. pumila* Rydb.,² has already been described as a species. The other, my *P. glabella* var. *simplex*, I have determined to name *P. Suksdorfiana*,³ as the most complete specimens which I have seen are the collections of W. N. Suksdorf (Flora of Washington, no. 2083) from cliffs near the Columbia River in Klickitat Co., Wash. My original description was drawn from somewhat depauperate material, and the diagnosis there published will have to be modified to include fronds up to 16 cm. long, and to admit the occasional compounding of the lower pinnae.

P. glabella and the two western segregates all differ consistently in the shape and texture of the pinnae, certain details of the indusium, the texture and microscopic structure of the stipe, and the size of the spores. The two western species may be distinguished readily by the last-mentioned character, for the average length of the spores in any mount from material of *P. Suksdorfiana* is 65 μ or more, while the average length of the spores in *P. pumila* is less than 55 μ . This distinction in size applies to both elliptical and tetrahedral spores, both of which have now been observed in each species.

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² Mem. N. Y. Bot. Garden, 1: 4. 1900. Rydberg's alternative name, *P. occidentalis*, published in the appendix to the same work (loc. cit. p. 466) is untenable, as it is confessedly a mere renaming of the same plant. It is based on Elias [not Aven] Nelson's varietal name *P. atropurpurea occidentalis*.

³ *PELLAEA Suksdorfiana* n. sp., *Pellaea glabella* Mett. ex Kuhn, var *simplex* Butters, Am. Fern Journal 7: 84. 1917.